

230x280 SHI-LR

Technical data



- Semiautomatic machine with hydraulic manipulation.
- The machine is designed for cutting of material in vertical and angle cuts, angle cuts are possible to set fluently from 60° right to 45° left.
- It is suitable for piece production and small series production.
- Thanks to its robust construction it enables cutting of wide range of materials including stainless steels and tool steels as well as profiles and full materials.

Control system:

- The Controller with PLC MITSUBISHI and features an automatic feed control BRP.
- Control panel MITSUBISHI as standard equipment. It uses touch display and PLC, which enable semi-automatic cutting (basic setting included) as well as communication with operator.
- Controller shows a lot of information about cutting process on the display:
 - Cutting cycle indication,
 - indication BRP,
 - indication – blade tightening,
 - time of the cut,
 - loading of blade in amperes,
 - speed of the blade,
 - cutting times measuring,
 - list of error messages.
- User's setting:
 - autostop of hydraulic unit
 - mode of arm moving after end of the cut
 - mode fast moving of the arm
 - mode time lag of shift speed
 - mode blade moving
 - mode jaw moving after cutting cycle finish
 - diagnostic of inputs and outputs
- STOP function – cutting: it enables to stop cutting by pressing STOP button at any time. The frame goes up with the running blade without opening the vice.
- Regulation of shaft speed (moving to cut) is manual and uses throttle valve placed beside control panel. Automatic (safety) regulation of shift speed PEGAS BRP. Principle: Machine will stop after exceeding set loading (defined in amperes).
- The ergonomical control panel is mounted on the movable console. The control panel is equipped with mechanical buttons and digital display of the machine control system. Mechanical buttons control basic saw movements (arm, vice) and cutting cycle start. The safety button is present on the panel as well. Buttons for controlling the movements of the machine are part of a high-quality foil keyboard.

Construction:

- The machine is constructionally designed in that way, so that it corresponds to standard exertions in productive conditions. That is why all carrying parts are made as cast-iron castings (solidity, absorption of vibrations and stops). Parts of arm, vice and turn table are cast iron.
- The arm of the machine is made of cast iron and it is designed to ensure the power and the precision of the cut. Arm is 25 degrees sloped, it increases the lifetime of blade.
- The arm rotated by a shaft (joint) which is supported by adjustable conical bearings
- Drive pulley and tightener pulley are both metal castings.
- Upper working arm position controlled by automatic stopper (DPP)

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- The down working position of the arm controlled by the microswitch. In the end position microswitch is on, arm goes to selected upper position.
- The vice is made from cast iron. Jaws ensure safe clamping of the material.
- The hydraulically operating vice with short travel is placed in an adjustable dovetail groove.
- Moving jaw of the vice is manual with a wheel and trapeze thread.
- Basic part of the vice moves according to the direction of the angle cut setting, fixation is made by the handle.
- Turn table is cast iron. A turntable gives a big place for support of material and its perfect clamping.
- Manual turning of the table for angle cuts, angle fixation using quick clamping lever.
- General angles are adjusted by the nonius.

Basic equipment of the machine:

- The blade leading in guides with hardmetal plates and leading bearings and along cast iron pulleys.
- There is a guide situated on the firm beam on the drive side. On the tightening side there is the guide situated on the moving beam.
- The guide beams of moving band guide is adjustable in whole working range. Manual adjustment and fixing of the guide beams.
- The saw-band is equipped with a guard, which protects the operator from millings and cutting emulsion.
- Mechanic tightening of the blade.
- Automatic indication of blade tension.
- A passive driven cleaning brush for perfect cleaning and function of blade.
- Drive of machine is solved by worm gear box with maintenanceless oil filling. Three-phases electromotor with double winding, with a frequency converter for a fluent regulation of the blade speed from 20 to 100 m/min. Sturdy flange with shaft. Termoprotection of engine.
- The cooling system distributes cutting emulsion to the band guides.
- Massive base with a tank for chips. Base is designed for manipulation with machine by pallet truck and also by any high lift truck.
- Indication of blade tightening and opening of the cover.
- Controlling 24 V.
- Maschine is equipped with hydraulic system which controls all functions of that machine. It pushes the arm to cut, pulls up the arm and opens and closes vices.

Basic accessories of machine:

- Measuring end stop.
- Band saw blade.
- Set of spanners for common service.
- Manual instructions in electronic form (CD).

Operating cycle:

After manual adjustment of the jaws the operator starts the cycle with a switch on the control panel. The hydraulic cylinder of the vice grips the material and the saw starts working. The cutting speed of the arm is controlled by a throttle valve. Arm and vice movements after cut finish following set user parameter. The vice opens and the operator can handle the material.

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Cutting parameters					
	230	190	120	185	x
	150*	110*	80*	110*	x
	280x220	180x170	120x90	180x120	280x120

* Recommended values. Recommendations of band blade producers are to be followed when choosing to cut full material, their dimensions are limited by available size of the teeth for the specific type of the band.

- Cutting of the bundle without upper vice HP. HP = accessory for additional price. The cutting parameters are limited when using.

Cutting parameters		
the shortest cutting	3	mm
the smallest divisible diameter	5	mm
the shortest rest during one cut	30	mm

Performance parameters		
drive of the blade	kW	1,5
drive of the hydraulic aggregate	kW	0,44
pump of the cooling emulsion	kW	0,045
total input	kW	3,33
cutting speed	m/min	20-100
diameter of the blade	mm	2720x27x0,9
electric connection		3x400V, 50 Hz, TN-S
Distributor RM	kW	0,1

Working movements	
feed of the Frame to the cut	hydraulically
feed of the material	manually
clamping of material	hydraulically
bend tension	manually
cleaning of the blade	passive cleaning brush

Saw dimensions					
Lenght	Width	Height		Height of the table	Weight
[L]	[B]	[Hmin]	[Hmax]	[V]	(kg)
2340	1050	1370	1890	795	420

